



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,378	07/09/2001	Markus Radimirsch	10191/1790	5929
26646	7590	12/21/2005	EXAMINER PEZZLO, JOHN	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			ART UNIT 2662	

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/807,378

Applicant(s)

RADIMIRSCH, MARKUS

Examiner

John Pezzlo

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 December 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 18-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 18-31 and 33 is/are rejected.
- 7) ☒ Claim(s) 32 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Claims 18-29, 31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Diepstraten et al. (US 5,329,531) hereinafter Diepstraten.

1. Regarding claim 18 – Diepstraten discloses providing multiframe, each of the multiframe being divided into a plurality of containers, each of the containers being selected to be so large that complete transmission frame, including at least one of an uplink data packet and a downlink data packet, and corresponding signaling data, can be accommodated in a single one of the containers, refer to Figures 5 and 6A and column 5 lines 48 to 68 and column 6 and column 7 lines 1 to 58.

Diepstraten monitoring by a first one of central units at least one complete one of the multiframe, refer to Figure 1 and column 1 lines 20 to 68 and column 5 lines 1 to 48.

Diepstraten discloses determining free capacity of frequency channels for further multiframe as a function of the monitoring, refer to column 7 lines 59 to 68 and column 8 lines 1 to 58.

Diepstraten discloses occupying one of the frequency channels that has capacity, refer to column 2 lines 15 to 68 and column 3 lines 1 to 38.

Diepstraten does not expressly disclose when there is a collision with a second one of the central units, the second one of the central units using a same time slot and a same frequency channel for a transmission frame as the first central unit.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art for the backbone network to have collisions if base A communicates with another base station over the backbone network. The suggestion/motivation for doing so would have been that Diepstraten discloses the use of a CSMA/CA system for communication over the wireless channel and this form of communication would have been used for the backbone network. Since the backbone network is asynchronous between base stations the likelihood of a collision would be extremely high resulting in the need for the base stations to implement a random backoff as disclosed in Diepstraten, refer to Figure 2 and column 4 lines 47 to 60. The benefit being that only protocol is required for the entire system, both the communication in a sector and between sectors. Utilizing the random backoff will enable each station to communicate without the high probability of a collision.

Diepstraten discloses at least one of the first one of the central units and the second one of the central units: i) immediately refraining from occupying the time slot, and ii) attempting occupation again after a time lag, refer to Figure 2 and column 4 lines 46 to 60.

Art Unit: 2662

2. Regarding claim 19 – Diepstraten discloses providing multiframe, each of the multiframe being divided into a plurality of containers, each of the containers being selected to be so large that a complete transmission frame, including at least one of an uplink data packet and a downlink data packet and corresponding signaling data, can be accommodated in a single one of the containers, refer to Figures 5 and 6A and column 5 lines 48 to 68 and column 6 and column 7 lines 1 to 58.

Diepstraten transmitting by a first one of the central units a signal in irregular intervals, the signal announcing that the first one of the central units wants to occupy one of the containers in a following multiframe, refer to column 2 lines 15 to 68 and column 3 lines 1 to 38.

Diepstraten does not expressly disclose that between transmissions by the first one of the central units, determining by the first one of the central units if another one of the central units wants to occupy a same one of the containers that the first one of the central units wants to occupy and if another one of the central units wants to occupy the same one of the containers withdrawing by the first one of the central units and attempting occupation again after a lag time.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art for the backbone network to have collisions if base A communicates with another base station over the backbone network. The suggestion/motivation for doing so would have been that Diepstraten discloses the use of a CSMA/CA system for communication over the wireless channel and this form of communication would have been used for the backbone network. Since the backbone network is asynchronous between base stations the likelihood of a collision would be extremely high resulting in

Art Unit: 2662

the need for the base stations to implement a random backoff as disclosed in Diepstraten, refer to Figure 2 and column 4 lines 47 to 60. The benefit being that only protocol is required for the entire system, both the communication in a sector and between sectors. Utilizing the random backoff will enable each station to communicate without the high probability of a collision.

3. Regarding claim 20 – Diepstraten discloses wherein the transmitting step includes transmitting the signal in random intervals, refer to Figure 4, TIM/Beacon, and column 5 lines 35 to 42.

4. Regarding claim 21 – Diepstraten discloses providing a collision prevention measure, refer to Figure 2, CSMA/CA, column 4 lines 47 to 60.

5. Regarding claim 22 – Diepstraten discloses providing a radio cell of the radio communication system, the radio cell being assigned at least one of the containers and at least one of the frequency channels, refer to Figure 1, callouts 10 and 12, and column 4 lines 20 to 36.

6. Regarding claim 23 – Diepstraten discloses wherein a carrier sense multiple access/collision avoidance (CSMA/CA) method is used for the collision prevention measure, refer to Figure 2, CSMA/CA, column 4 lines 47 to 60.

Art Unit: 2662

7. Regarding claim 24 – Diepstraten discloses selecting by the at least one of the first central unit and second central the lag time in a random manner, refer to Figure 2, CSMA/CA, column 4 lines 47 to 60.
8. Regarding claim 25 – Diepstraten discloses wherein occupying step includes reserving an entire container for a multiframe, refer to Figures 5 and 6A and column 5 lines 48 to 68 and column 6 and column 7 lines 1 to 58.
9. Regarding claim 26 – Diepstraten discloses wherein the radio communication system includes sectorized radio cells, refer to Figure 1, callouts 10 and 12, and column 4 lines 20 to 36.
10. Regarding claim 27 – Diepstraten does not expressly disclose wherein each of the central units only occupies one container per radio sector.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art that if only one container is required to complete the radio communication only one container per radio sector would be allocated. The suggestion/motivation for doing so would have been that Diepstraten discloses a multiframe system however the system is based on CSMA/CA and each sector only transmits when it has data, therefore, if only one container is needed then only one container per radio sector will be provided, refer to Figure 1, callouts 10 and 12, and column 4 lines 20 to 36. The benefit being that only resources are utilized when needed saving bandwidth for use by others with data to transmit.

Art Unit: 2662

11. Regarding claim 28 – Diepstraten discloses wherein the first central unit occupies more than one of the containers in at least one of the frequency channels, refer to Figure 1, callouts 10 and 12, and column 4 lines 20 to 36.

12. Regarding claim 29 – Diepstraten discloses occupying by the first central unit selected containers on different ones of the frequency channels using several transmission and reception branches, the selected containers coinciding or lying one behind the other, refer to Figure 1, callouts 10 and 12, and column 4 lines 20 to 36.

13. Regarding claim 31 – Diepstraten discloses carrying out radio communication by using a centrally controlled protocol, the centrally controlled protocol being one of a MAC protocol, an Internet protocol, an Ethernet protocol and an UMTS protocol, refer to Figure 1 and column 4 lines 20 to 60.

14. Regarding claim 33 – Diepstraten discloses selecting a large duration for the monitoring by the first central unit to provide a high probability of an active terminal transmitting once during a multiframe duration, refer to Figure 1 and column 1 lines 20 to 68 and column 5 lines 1 to 48.

II. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Diepstraten et al. (US 5,329,531) hereinafter Diepstraten in view of Rypinski (US 5,461,627).



Art Unit: 2662

1. Regarding claim 30 – Diepstraten discloses packetized digital voice services, refer to column 1 lines 35 to 60.

Diepstraten does not expressly disclose using an ATM cell as the data packet accommodating digital voice services.

Rypinski discloses using an ATM cell as the data packet accommodating digital voice services, refer to column 19 lines 24 to 40.

At the time of the invention, it would have been obvious to an ordinary person of skill in the art to combine the packetized digital voice services of Diepstraten with the ATM packets of Rypinski. The suggestion/motivation for doing so would have been that Diepstraten discloses the use of ISDN services which includes ATM, refer to column 1 lines 35 to 60. The benefit being that ATM is a standard protocol used in communication and providing this service will offer the customer more compatibility with other systems.

#### ***Allowable Subject Matter***

Claim 32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

Art Unit: 2662

Applicant's arguments filed 8 December 2005 have been fully considered but they are not persuasive. Applicant argues on page 7 of the response that the examiner has engaged in improper hindsight reconstruction. The examiner respectfully disagrees. The reference, Diepstraten, discloses both a wireless system and a wireline system. The reference utilizes CSMA/CA in the wireless system with the use of a random backoff. The examiner has stated that since this protocol is being used in the wireless portion of the system it would be obvious to utilize the same protocol in the wireline system. Certainly it is more cost effective to reuse a feature rather than start from scratch and develop a new approach. Especially since the wireline network has central units, which are just as likely to communicate at the same time over the wireline network just as the mobile units communicate over the wireless network at the same time. All the central units are autonomous with no master station designated to control transmissions. One difference between the wireline network and the wireless network is the central units are fixed in position on the wireline network, which makes it easier to determine the time to listen or the time to wait for a backoff. This time can be calculated since all the parameters are known. As it turns out if the multiframe duration is longer in time than the calculated time to listen, the multiframe time can easily be used for the backoff time since it would guarantee compliance with the proper time to backoff and be very easy to implement since this time is already used in the system. The examiner has shown that there is strong motivation from a cost viewpoint as well as from a sound engineering approach to suggest that the reference, Diepstraten, would have been modified by an ordinary person of skill in the art to provide for collisions on the wireline network, which are sure to occur since there is no mechanism to prevent them. After a collision occurs a

Art Unit: 2662

central unit would wait an amount of time, which is longer than the wireline bus length for a transmission, in this case that time would be the duration of a multiframe transmission.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

1. Chuah (US 6,226,277 B1) discloses a method for admitting new connections based on usage priorities in a multiple access system for communications networks.

Art Unit: 2662

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John Pezzlo whose telephone number is (571) 272-3090.

The examiner can normally be reached on Monday to Friday from 8:30 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C.

or faxed to:

(571) 273-8300

For informal or draft communications, please label "PROPOSED" or "DRAFT"

Hand delivered responses should be brought to:

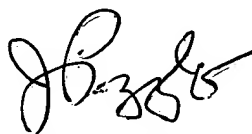
Jefferson Building

500 Dulany Street

Alexandria, VA.

John Pezzlo

20 December 2005

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**